

Title: Preferably Pb-free and As-free optical glasses with  $T_g \leq 500^\circ\text{C}$

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### Claims

- 10 1. Optical glass having a refractive index  $n_d$  of  $1.48 \leq n_d \leq 1.56$ , an Abbe number  $v_d$  of  $64 \leq v_d \leq 72$  and a transformation temperature  $T_g \leq 500^\circ\text{C}$ , which comprises the following composition (in % by weight):

SiO <sub>2</sub>	53	-	58
B <sub>2</sub> O <sub>3</sub>	11	-	15
Al <sub>2</sub> O <sub>3</sub>	16	-	20
Na <sub>2</sub> O	0	-	13
K <sub>2</sub> O	0	-	13
$\Sigma\text{M}_2\text{O}$	9	-	13
F	0.5	-	4

- 15 2. Optical glass according to Claim 1, which comprises the following composition (in % by weight):

SiO <sub>2</sub>	53	-	58
B <sub>2</sub> O <sub>3</sub>	11	-	15
Al <sub>2</sub> O <sub>3</sub>	16	-	20
Na <sub>2</sub> O	9	-	13
F	0.5	-	4

- 20 3. Optical glass according to Claim 1 or 2, which comprises the following composition (in % by weight):

SiO <sub>2</sub>	53	-	56
B <sub>2</sub> O <sub>3</sub>	11	-	15
Al <sub>2</sub> O <sub>3</sub>	16	-	18
Na <sub>2</sub> O	11	-	13
F	0.5	-	4

4. Optical glass according to one of the preceding claims, which as refining agents contains the following components (in % by weight):

$\text{Sb}_2\text{O}_3$	0	-	1	and/or
$\text{SnO}$	0	-	1	and/or
$\text{NaCl}$	0	-	1	and/or
$\text{SO}_4^{2-}$	0	-	1	

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5. Use of a glass according to one of Claims 1 to 4 for an optical element in the application areas of imaging, projection, telecommunications, optical communication technology and/or laser technology.